Attorney Docket: 65678-0003
Application Number 09/441,289

PATENT

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10-2-03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:	SUHY, et al.	Group Art Unit :	2161
Serial No.:	09/441,289	Examiner:	Hewitt, et al.
Filed:	11/16/99		
For:	APPARATUS AND METHOD FOR TRACKING AND MANAGING PHYSICAL ASSETS		

Attorney Docket No.: 65678-0003 (1-21739)

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BRIEF ON APPEAL

Honorable Sir:

This Appeal is taken from the Examiner's Final Rejection dated March 19, 2003 (hereinafter the "Final Office Action") of claims 16 and 21-48 in the above-identified application. The Notice of Appeal was timely filed on July 9, 2003. Submitted herewith are two additional copies of this Appeal Brief. Applicants (hereafter "Appellants") respectfully request

consideration of this appeal by the Board of Patent Appeals and Interferences for allowance of the present patent application referenced above.

An oral hearing is not desired.

I. REAL PARTY IN INTEREST

The Real "Party-In-Interest" is Dana Corporation, located at 4500 Dorr Street, P.O. Box 10000, Toledo, Ohio 43697. Dana Corporation was assigned all rights to the U.S. Patent Application identified by Serial No. 09/504,000 on May 15, 20003 by Dana Commercial Credit Corporation of 660 Beaver Creek Circle, Maumee, Ohio 43537.

II. RELATED APPEALS AND INTERFERENCES

On July 9, 2003, Appellants filed a notice to appeal the final rejection of U.S. Application Serial No. 09/504,000 filed February 14, 2000, an application that claims priority from the application that is the subject of this Appeal.

III. STATUS OF CLAIMS

Claims 16 and 21-48 are pending in the application and are the subject of this Appeal. The present application was filed on November 16, 1999 with originally-filed claims 1-20. In response to the Office Action dated December 18, 2000 (Paper No. 10), claim 16 was amended, claims 1-15 and 17-20 were cancelled. Claims 21-42 were added in that same Amendment. In response to the Office Action dated June 6, 2001 (Paper No. 13), claims 43-48 were added. In response to the Advisory Action dated March 22, 2002 (Paper No. 21), Appellants submitted a Request for Continued Examination (RCE). In the Office Action dated May 21, 2002, the finality of the previous Office Action was withdrawn. On December 3, 2002, a claim amendment was submitted to the Examiner that added some of the structural elements of claim 21 into to the method claim of claim 16. Although such changes were made at the suggestion of the Examiner in order to place claim 16 in condition for allowance, the amendment entered by the Examiner on December 3, 2002 resulted in the Final Rejection dated March 19, 2003 (the "Final Office Action"). Appellants submitted a Notice of Appeal dated July 9, 2003. No claims have been allowed.

Claims 16 and 43-48 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,141,629 to Yamamoto et al. ("Yamamoto") in view the article by Bob

Deierlein in Beverage World titled "New lease on truck life: Automated maintenance" ("Deierlein"), the article by Ira Sager in Business Week titled "The Great Equalizer" ("Sager"), U.S. Patent No. 6,003,808 to Nguyen et al. ("Nguyen"), and U.S. Patent No. 4,404,639 to McGuire et al. ("McGuire"). Claims 21-42 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, U.S. Patent No. 6,012,045 to Brazilai et al. ("Brazilai"), Nguyen, and McGuire.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection. A copy of all claims on appeal is attached hereto as an Appendix.

V. SUMMARY OF THE INVENTION

By way of background, many businesses operate a plurality of physical assets to assist in the performance of the daily activities that are required to produce goods or services. For example, a typical manufacturer of goods often uses a fleet of industrial equipment, such as forklifts, conveyors, machine tools, and the like, in its daily operations to facilitate the manufacture of goods for its customers. In a similar manner, a typical provider of services also often employs a plurality of assets, such as computers, communications equipment, photo imaging equipment, and the like, in its daily operations to facilitate the performance of services for its customers. Traditionally, businesses have purchased such assets for use in their facilities and have employed staff to operate and maintain the assets in furtherance of the manufacture of goods or the performance of services.

Regardless of the specific nature of the business, the operation of these assets has usually been considered to be somewhat ancillary to the core nature of the business. Consequently, the costs associated with the procurement and utilization of such assets have not been traditionally monitored or analyzed by the business in great detail. Rather, such costs have usually been considered to be relatively fixed costs of doing business, and any management of such assets has been performed, if at all, by relatively low level employees having little training or inclination to increase productivity and reduce costs.

However, optimization of productivity and minimization of costs are key considerations in the modem business environment.

The present invention relates to a computer based system for automatically gathering, analyzing, and delivering information relating to the procurement and utilization of a plurality of such assets, such as a fleet of industrial equipment, so as to maximize productivity and to reduce operating costs and administrative burdens. Each of the assets is preferably provided with a data acquisition device for sensing and storing one or more operating characteristics associated therewith. That information can be transmitted wirelessly through space to a receiver connected to a local controller for storing such information and for transmitting such information over a network such as the internet to a remote analysis system. The remote analysis system automatically updates individual records associated with each of the assets with the information received from the internet. In response to such information, the remote analysis system automatically analyzes the newly provided information and generates reports regarding scheduled maintenance, warranty coverage, and other management information. These reports can be transmitted back to an administrative controller for review by one or more persons responsible for managerial review. Additionally or alternatively, the remote analysis system can automatically post such reports on a website and, thus, be made available to one or more of such persons upon request.

VI. ISSUES PRESENTED

A. Whether claims 16 and 43-48 are unpatentable under 35 U.S.C. §103(a) over (i) Yamamoto in view of (ii) Deierlein, (iii) Sager, (iv) Nguyen, and (v) McGuire.

B. Whether claims 21-42 are unpatentable under 35 U.S.C. §103(a) over (i) Yamamoto, (ii) Brazilai, (iii) Nguyen, and (iv) McGuire.

VII. GROUPING OF CLAIMS

The claims do not stand or fall together. For purposes of this appeal, claims 16 and 43-48 stand or fall together as Claim Group A; claims 21-24, 27-35, and 38-42 stand or fall together as Claim Group B; and claims 25, 26, 36, and 37 stand or fall together as Claim Group C. Separate reasons for patentability of the above-indicated Claim Groups A-C are presented in the Arguments section pursuant to 37 C.F.R. § 1.192(c)(5).

VIII. ARGUMENTS

A *prima facie* case of obviousness requires, among other things, that the applied references teach or suggest all of the claim limitations. *See* MPEP §2143; *In re Vaeck* 947 F.2d 488, 493, 20 USPQ2d 1438, 1444 (Fed. Cir. 1991); *In re Royka*, 490 F.2d 981, 180 USPQ 560, 562 (CCPA 1972). Appellants respectfully traverse the 103(a) rejections because the references cited in the Final Office Action only "generally address" elements of the claims. Consequently, the references do not teach every element of the claims, and the rejections do not satisfy the standard set forth by the Federal Circuit in *In re Thrift*, Case Number 01-1445 (Fed. Cir. August 9, 2002), which standard prohibits rejections of claims based on a "very general and broad conclusion" when "cited references do not support each limitation" in a claim.

A *prima facie* case of obviousness also requires that there be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. See MPEP §2143; *In re Linter*, 458 F.2d 1013, 173 USPQ 560, 562 (CCPA 1972). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Moreover, the fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient by itself to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). Appellants respectfully traverse the 103(a) rejections because there is no suggestion, motivation, or objective reason to combine the cited references. Further, the cited references teach away from their combination.

A. CLAIM GROUP A WAS INCORRECTLY REJECTED BECAUSE THE FINAL OFFICE ACTION FAILS TO ESTABLISH A PRIMA FACIE CASE OF OBVIOUSNESS

In the Final Office Action, claims 16 and 43-48 (Claim Group A) were rejected as being unpatentable over (i) Yamamoto in view of (ii) Deierlein, (iii) Sager, (iv) Nguyen, and (v) McGuire. Appellants respectfully submit that the claims of Claim Group A are not obvious because the cited references do not teach all of the claim limitations of Claim Group A.

In addition to the failure of the Examiner to provide references disclosing each and every claim element within Claim Group A, the combination of the cited references was improper because the cited references teach away from each other and Claim Group A. Thus, the Examiner has failed to establish a *prima facie* case of obviousness against Claim Group A. Claim 16 is the only independent claim in Claim Group A.

> 16. A method for automatically gathering and analyzing data without human intervention relating to an asset comprising the steps of:
>
> (a) generating a maintenance invoice from an analysis controller when service is performed on the asset, wherein the maintenance invoice includes an indication of the amount of usage of the asset, wherein said indication of the amount of usage is captured by a data acquisition device, and wherein a receiver receives the indication of the amount of usage from the data acquisition device through a transmitter;
>
> (b) transmitting the maintenance invoice on a communications network from the analysis controller to an administrative controller;
>
> (c) comparing on the analysis controller, the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty period; and
>
> (d) generating a warranty report from said administrative controller without said human intervention if the amount of usage is less than the predetermined standard.

1. Final Office Action ignores the latest amendment to Claim 16

It is important to note that on December 3, 2002, an amendment was submitted by the Appellants at the urging of the Examiner. In that amendment, claim 16 was amended to include the structural elements of claim 20. The Office Action Summary Page for the Final Office Action acknowledges the Final Office Action is "responsive to communication(s) filed on December 3, 2002. However, the Final Office Action fails to otherwise address claim 16 as amended by the Appellants. Some of the added elements are identified in bold underlined text below.

> 16. A method for automatically gathering and analyzing data without human intervention relating to an asset comprising the steps of:
>
> (a) generating a maintenance invoice from an **analysis controller** when service is performed on the asset, wherein the maintenance invoice includes an indication of the amount of usage of the asset, wherein said indication of the amount of usage is captured by a **data acquisition device**, and wherein a **receiver** receives the indication of the amount of usage from the **data acquisition device** through a **transmitter**;
>
> (d) transmitting the maintenance invoice on a **communications**

network from the analysis controller to an administrative controller;

(e) comparing on the **analysis controller**, the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty period; and

(f) generating a warranty report from said **administrative controller** without said human intervention if the amount of usage is less than the predetermined standard (emphasis added).

At no point in the Final Office Action discussion of claim 16 (Office Action Pages 2-4 does the Examiner even assert the existence of elements such as the analysis controller, the data acquisition device, the receiver, the transmitter, or the communications network. Even though elements such as the analysis controller, the data acquisition device, the receiver, the transmitter, and the communications network are material claim elements with respect to claim 16, those elements were not addressed by the Examiner. Moreover, the assertion that Yamamoto teaches an administrative controller is incorrect, as discussed below in the context of claim 21, and limited to the context of receiving the transmitted maintenance invoice as discussed below. Even if all of the assertions of the Examiner with respect to claim 16 were accurate, the failure of the Examiner to address these additional claim elements precludes the rejection of Appellants claims. As currently amended, these additional claim elements are material, and have been totally ignored by the Examiner in the Final Office Action. The absence of even one such element in the prior art would preclude a 103 rejection by the Examiner. Thus, claim 16 is in condition for allowance.

However, even without the claim elements added in the December 3, 2002 amendment, material distinctions between the cited references and Appellants' claims would still preclude a proper rejection of Appellants' claims. Examples of claim elements from Claim Group A that are not disclosed in the cited art references include: (i) generating a maintenance invoice without human intervention; (ii) transmitting the maintenance invoice to an administrative controller without human intervention; (iii) comparing the indication of the amount of usage of an asset with a predetermined standard that is representative of the warranty without human intervention; (iv) generating a warranty report if the amount of usage is less than the predetermined standard without human intervention; (v) processing the performing of service on an asset by a non-owner; and (vi) the limitation of requiring service to be provided on an asset before the amount of usage of the asset is compared to the predetermined standard.

2. The cited references do not teach "generating a maintenance invoice" "without human intervention."

The cited references do not teach the functionality of "generating a maintenance invoice" while constrained by the "without human intervention" limitation of claim 16. Although the Examiner asserts that McGuire teaches the generation of an invoice (Final Office Action, page 4), it is clear from McGuire's disclosure that human intervention is needed to generate the invoice. Specifically, McGuire teaches that when the invoice is to be generated, "the operator uses the keyboard...to enter the customer information into the system" (col. 4, lines 58-62). Moreover, McGuire teaches that blanks on a work order "will require an entry by the operator" (col. 4, lines 64-66). Therefore, McGuire's disclosed system cannot generate an invoice "without human intervention." The other cited references also fail to disclose "generating a maintenance invoice" in accordance with the "without human intervention" element of claim 16.

Similarly, Sager does not teach the process of "generating a maintenance invoice . . . without human intervention" as provided for in claim 16. Although Sager discloses moving invoices electronically (page 3, lines 38-48), Sager does not teach that its invoices are generated "without human intervention." To the contrary, Sager teaches that personnel can transmit information across an electronically linked virtual factory (page 3, lines 38-43). In other words, Sager teaches transmissions that require human intervention to be transmitted. Moreover, Sager's "invoices" are not even related to maintenance, but are actually bills for factory orders that are communicated electronically by linking factory and business locations together to form a virtual factory (page 3, lines 38-48). Sager's references to billing and invoicing functionalities are nothing more than extremely broad references with no disclosure as to how such functionalities are performed. The disclosure in Sager is at too high of a level to be applied as prior art to Claim Group A.

Nguyen also fails to disclose "generating a maintenance invoice" "without human intervention" (claim 16). Although Nguyen teaches the automatic recording of maintenance actions (col. 1, line 65 – col. 2, line 2), no recorded maintenance actions are logged until a user has performed a suggested maintenance action and inputted confirmation of his action using an interface (col. 3, lines 46-66). Moreover, Nguyen teaches that the user is prompted to log

maintenance actions (col. 3, lines 65-66). It is only after the user has performed such tasks that any recorded maintenance data is logged (col. 4, lines 20-27). Thus, Nguyen teaches that human intervention is necessary for logging the maintenance data. Moreover, Nguyen does not even mention an "invoice."

The other references, Yamamoto and Deierlein, also fail to mention an "invoice," let alone "generating a maintenance invoice" "without human intervention" (claim 16). The Examiner admits that Yamamoto does not explicitly recite invoice generation (Final Office Action, page 3). Moreover, Yamamoto does not disclose any type of multi-entity awareness, much less billing or invoice functionality that is necessarily dependent upon multi-entity awareness. Similar to Sager, Deierlein only generally discloses that "the supplier will be billed directly" (page 2, lines 10-18), but does not provide any disclosure as to how this will be done. The disclosure in Deierlein is at too high of a level to be applied as prior art to Claim Group A. Moreover, Deierlein's system requires human intervention to operate. Specifically, Deierlein teaches that a human user of the system must activate the system "by touching a coin-shaped, data-memory button on the vehicle with a probe from the computer (page 1, lines 22-32). Therefore, Claim Group A includes elements not disclosed in the prior art.

3. The cited references do not disclose "transmitting the maintenance invoice to an administrative controller" in a manner that is "without human intervention."

In regards to the claim 16 functionality of "transmitting the maintenance invoice to an administrative controller," the cited references do not teach transmitting any sort of invoice "without human intervention." As discussed above, Sager teaches that human intervention is used to transmit information across a virtually connected factory system (page 3, lines 38-43). Similarly, Yamamoto fails to teach transmitting maintenance invoices "without human intervention." Although Yamamoto discloses communications being made electronically (col. 9, lines 24-30), the communications are repeatedly disclosed as being "inputted" to a computer. Yamamoto fails to define how data is "inputted" to the computers, and the context of Yamamoto's teachings clearly teaches away from a capability of operating "without human intervention." Yamamoto discloses that when a user performs in-house maintenance, "data indicating maintenance information...are input to the computer" (col. 11, lined 16-23). Yamamoto further discloses that maintenance information is inputted by an "input device" (col.

12, line 63 – col. 13, line 3). However, Yamamoto does not disclose the capability of inputting maintenance activities into a computer "without human intervention." Without any such teaching, Yamamoto's "inputting" of maintenance data to a computer necessarily requires human intervention.

Deierlein also fails to disclose "transmitting the maintenance invoice" "without human intervention" (claim 16). To the contrary, Deierlein teaches a downloading of fuel information from a hand-held computer to a "shop's main computer at the end of the day" (page 1, lines 22-37). This is not a teaching of transmitting "without human intervention." A download from a hand-held computer that occurs at the end of the day readily indicates that human intervention is required. The user of the hand-held computer appears to be required to either bring the hand-held computer into proximity with the main computer or initiate a transmission of data. In any event, there is no teaching of "transmitting the maintenance invoice . . . without human intervention" as described in Appellants claim 16.

Although the Examiner asserts that Deierlein discloses "transmitting the maintenance invoice" (Final Office Action, page 3; Deierlein page 1, lines 45-50), Deierlein teaches only that a leadman can use a computerized system to access maintenance histories of vehicles (Deierlein page 1, lines 45-50). The functionality of using a computer system to access maintenance information does not mean that the maintenance information was ever transmitted to the computer system "without human intervention." Deierlein fails to disclose that maintenance information was transmitted to its computer system "without human intervention" prior to the leadman accessing the computer system. Without such a teaching, it would not have been obvious to one of ordinary skill in the art to transmit maintenance information "without human intervention" because the computer system could be used to access data stored on other computer systems, similar to accessing data over the Internet. In such a case, data would be transmitted to the computer system in response to a user accessing the data, which indicates that human action is necessary to transmit the response to access requests. Moreover, Deierlein does not teach any sort of invoice, let alone a maintenance invoice. Therefore, Deierlein fails to disclose "transmitting the maintenance invoice to an administrative controller" in a manner that is "without human intervention" in accordance with claim 16.

Nguyen fails to disclose "transmitting the maintenance invoice to an administrative controller" in an automated manner "without human intervention" as described in claim 16.

Although Nguyen teaches the automatic recording of maintenance actions (col. 1, line 65 – col. 2, line 2), similar to the discussion above, no recorded maintenance actions are transmitted until a user has performed a suggested maintenance action and inputted confirmation of his action using an interface (col. 3, lines 46-66). Moreover, Nguyen teaches that the user is prompted to log maintenance actions (col. 3, lines 65-66). It is only after the user has performed such tasks that any recorded maintenance data could be transmitted (col. 4, lines 20-27). Thus, Nguyen teaches that human intervention is a necessary element for any transmissions of maintenance data.

McGuire also fails to disclose "transmitting the maintenance invoice to an administrative controller" in an automated manner "without human intervention" as provided by claim 16. Similar to the discussion above in relation to "generating a maintenance invoice," McGuire's system cannot distribute invoices "without human intervention." McGuire teaches that after a user has completed an invoice, the invoice can be printed and then distributed as a paper copy (col. 9, lines 28-40). The printing and distribution of a paper invoice taught by McGuire requires human intervention and does not disclose "transmitting the maintenance invoice to an administrative controller" "without human intervention" (claim 16). Therefore, Claim Group A includes elements not disclosed in the prior art.

4. The cited references do not disclose "comparing the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty period" in a manner "without human intervention."

Contrary to the Examiner's assertion, Deierlein does not disclose "comparing the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty period" "without human intervention" (claim 16). Deierlein teaches only that a "computer automatically informs the technician if a repair is covered by warranty" (page 2, lines 10-17) without disclosing how warranty determinations are performed. As mentioned above, the Deierlein disclosure is at too high of a level of abstraction to provide sufficient detail necessary to preclude Claim Group A. Deierlein does not disclose a warranty period or a predetermined standard that is representative of the warranty period. Moreover, Deierlein teaches that a technician is informed if a repair is covered by warranty, which teaches away from operations performed "without human intervention."

The Examiner admits that Yamamoto does not explicitly recite warranties (Final Office Action, page 3). Sager also fails to disclose a warranty period. Sager's single teaching of warranties relates to the ability to "negotiate longer warranties from suppliers" (page 1, lines 14-15), and not to the comparing of an asset's amount of usage with "a predetermined standard that is representative of the warranty period" (claim 16). Similarly, McGuire's only mention of a warranty is unrelated to the claim 16 functionality of "comparing the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty period." Although McGuire teaches that a service invoice may contain a warranty number (col. 4, line 66 – col. 5, line 15), a warranty number is not "a predetermined standard that is representative of the warranty period" (claim 16). Moreover, McGuire does not disclose any functionality of comparing an amount of usage with a predetermined standard that is representative of a warranty period.

Nguyen also fails to disclose "comparing the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty period" "without human intervention" (claim 16). As discussed above, Nguyen's system requires human input. Nguyen teaches that a user of the system must input confirmation of his actions using an interface (col. 3, lines 51-66). If the user does not provide this input, it appears that Nguyen's system would never compare "the indication of the amount of usage of the asset with a predetermined standard" (claim 16) because the maintenance log would be empty. Thus, by requiring human input, Nguyen does not teach claim 16 as a whole.

5. The cited references do not disclose "generating a warranty report if the amount of usage is less than the predetermined standard" in a manner that is "without human intervention."

Similar to the discussion above concerning the claim 16 element of "a predetermined standard that is representative of the warranty period." The cited references fail to disclose the claim 16 functionality of "generating a warranty report if the amount of usage is less than the predetermined standard" in a manner that is "without human intervention." Contrary to the Examiner's assertion, Nguyen does not disclose the claim 16 functionality of "generating a warranty report if the amount of usage is less than the predetermined standard" in a manner that is "without human intervention" . As discussed above, Nguyen's system requires human input. Nguyen teaches that a user of the system must input confirmation of his actions using an

interface (col. 3, lines 51-66). If the user does not provide this input, it appears that Nguyen's system would never generate a warranty claim report because the maintenance log would be empty. Thus, by requiring human input, Nguyen does not teach claim 16 as a whole.

Deierlein does not disclose "generating a warranty report if the amount of usage is less than the predetermined standard" in a manner that is "without human intervention." Deierlein teaches only that a "computer automatically informs the technician if a repair is covered by warranty" (page 2, lines 10-17) without disclosing any conditions for determining when to generate a warranty report. Moreover, Deierlein's technician teaches away from operations performed "without human intervention."

The Examiner admits that Yamamoto does not explicitly recite warranty reports. (Final Office Action, page 3). Sager also fails to disclose a warranty report. As discussed above, Sager's single teaching of warranties relates to the ability to "negotiate longer warranties from suppliers" (page 1, lines 14-15), and not to generating a warranty report. Similarly, McGuire's only mention of a warranty is unrelated to "generating a warranty report if the amount of usage is less than the predetermined standard" (claim 16). Although McGuire teaches that a service invoice may contain a warranty number (col. 4, line 66 – col. 5, line 15), a warranty number is not a warranty report as claimed. Moreover, McGuire does not disclose any functionality of conditionally "generating a warranty report if the amount of usage is less than the predetermined standard" in a manner that is "without human intervention." Therefore, the claims of Claim Group A include elements not disclosed in the prior art.

Claim 16 and all of the claims that depend on claim 16 are in condition for allowance for the numerous reasons provided above. In addition to the analysis above, claims that depend on claim 16 are allowable for additional reasons. Claims 32-48 depend on claim 16, and belong to Claim Group A.

6. Contrary to the Examiner's assertion, Sager does not disclose the claim 43 functionality of an "entity performing service on the asset" that "is not the owner"

Contrary to the Examiner's citation of Lines 5-10 on Page 1 of Sager, Sager does not disclose the limitation of a non-owner providing service. There is nothing in the Sager reference to refute the conclusion that Ryder both owns the trucks, and provides service on the trucks. The

ability to "negotiate longer warranties from suppliers" supports the conclusion that Ryder purchases the trucks from its suppliers, not that trucks are operated by non-owners.

Although the above argument was made in the Appellants' response to the Office Action dated May 21, 2002, the Final Office Action fails to respond to the Appellants' argument. Instead, the Examiner reasserted the same argument without any acknowledgement of the Appellants' related remarks made in response to the Office Action dated May 21, 2002. The Final Office Action fails to cite to any disclosure of the elements of claim 43.

7. The cited references do not disclose the Claim 48 limitation "wherein service must be performed on an asset before the amount of usage of the asset is compared to the predetermined standard."

No reference is provided by the Examiner to support the assertion that "it would have been obvious to repair an asset without referring to a warranty if the communication system was down and the maintenance data could not be obtained instantly." The Final Office Action fails to respond to the Appellants' request made in response to the Office Action dated May 21, 2002 that the Examiner, pursuant to MPEP 2144.03, either provide a reference to support the assertion of obviousness, or provide a notarized affidavit in support of the assertion. The Final Office Action fails to cite to any disclosure of the elements of claim 48.

8. There was no objective reason to modify or combine the teachings of the cited references available to one of ordinary skill in the art at the time of the invention because the cited references teach away from each other and away from Claim Group A

The Examiner improperly combined five references in order to assert a rejection of Claim Group A. The Examiner asserted on page 4 of the Final Office Action that it would have been obvious to one of ordinary skill in the art to combine the five references in order to reduce time lost due to capital equipment failures and part procurement through the automatic recording of maintenance actions by maintenance personnel and the validating and/or generating of warranty claim applications (Nguyen, col. 1, line 65 – col. 2, line 2). However, there was no objective reason, suggestion, or motivation at the time of the invention to combine the five cited references. Moreover, the cited references teach away from each other and from the Appellants' claims.

i. The Examiner improperly asserts that a combination of the five cited references would have been obvious to one of ordinary skill in the art at the time of invention.

It is impermissible to reconstruct the claimed invention from selected pieces of prior art absent some suggestion, teaching, or motivation in the prior art to do so. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051-52, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988). Thus, references cannot be combined based on hindsight. The Examiner appears to have improperly based the combination of the five cited references on the elements of the claims. In the previous Office Action dated May 21, 2002, the Examiner cited three (Yamamoto, Deierlein, and Sager) of the five cited references as support for a rejection of Claim Group A pursuant to 35 U.S.C. 103(a). In response, the Appellants asserted that the three references did not disclose all of the claim limitations of Claim Group A, and that the references were in any case, improperly combined. Instead of addressing the Appellants' arguments, the Examiner cited two additional references (Nguyen and McGuire) and asserted that the five combined references would have made Claim Group A obvious to one of ordinary skill in the art. It appears that the Examiner added the Nguyen and the McGuire references in response to the Appellants' claims and arguments proffered in support of the claims. The fact that the Examiner combined five references to reject Claim Group A is substantial evidence that the claims of Claim Group A would not have been obvious to one of ordinary skill in the art at the time of invention because it would not have been obvious to one of ordinary skill in the art to combine five references, and much less the five cited references, to support a rejection of Claim Group A.

The Examiner has not provided any evidence within the various disclosures, to support the contention that it is obvious to combine the five cited references. Nor has the Examiner refuted the analysis of the Appellants with respect to the fact that the cited references actually teach away from each other, and the Appellants' claim. It is the Examiner's burden to provide such evidence in order to reject Applicants' claims. To the extent that the Examiner has simply baldly asserted that something is "obvious" the Appellants have consistently requested pursuant to MPEP 2144.03 that the Examiner either provide a reference to support the assertion of obviousness, or provide a notarized affidavit in support of the assertion. The Examiner has not fulfilled the burden needed to reject all the claims within Claim Group A, and therefore, the

claims in Claim Group A are in condition for allowance due to the various reasons discussed above and below.

ii. Yamamoto teaches away from the Appellants' claims and the other cited references.

Yamamoto is exclusively concerned with the inner technical workings of an individual machine and does not teach a third-party relationship used to improve product reliability. There is no cognizance in Yamamoto that different organizations sell, purchase, use, fix, lease, and otherwise interact with industrial equipment and other forms of assets. There are frequent references in Yamamoto to the providing of "in-house" maintenance. Thus, Yamamoto focuses exclusively on the technical aspects of an individual machine, and ignores attributes such as organization affiliation, billing, and invoicing, because such attributes are not relevant if the maintenance is provided "in house." Even with a "worldwide" communication network (Column 8, Lines 27-34), there is no evidence in Yamamoto that any type of aggregate or statistical analysis is ever performed. In summary, Yamamoto seeks only to answer one narrow question—when should maintenance next be performed with respect to a particular component in a particular machine. None of the process steps in Claim Group A relate to this question in even a general way. Therefore, Yamamoto teaches away from the Appellants' claims.

Similarly, Yamamoto also teaches away from Sager, Deierlein, Nguyen, and McGuire. Yamamoto focuses solely on determining an appropriate time for the next maintenance action of a machine and does not disclose a third-party relationship. In contrast, the other cited references teach third-party relationships. Nguyen teaches sending warranty claim applications to an aircraft manufacturer or servicing agent (col. 5, lines 1-16). McGuire teaches invoicing an owner of a vehicle for services performed (col. 9, lines 28-40). Sager teaches negotiating longer warranties from suppliers (page 1, lines 14-15). Deierlein teaches billing a supplier for repair services (page 2, lines 10-17). Therefore, it would not have been obvious to one of ordinary skill in the art to combine Yamamoto with the other cited references.

iii. Sager and Deierlein teach away from Yamamoto by teaching data acquisition without disclosing any technical inner-workings of a machine.

Deierlein discloses a system for "gathering information on engine performance and fuel consumption" (page 1, line 8), and Sager discloses a system for capturing empirical data, and using that data to "negotiate longer warranties from suppliers" and otherwise better manage an inventory of assets (page 1, lines 10-15). In contrast to Yamamoto's teachings of specific methods for determining when a machine is due for maintenance, neither Sager nor Deierlein disclose any cognizance of the technical inner-workings of a machine for the purpose of determining when maintenance work should be performed on that machine. Moreover, Sager and Deierlein do not teach of applying contractual warranties or of generating invoices. In summary, there is no suggestion or motivation in the art to combine Yamamoto, Sager, and Deierlein as suggested by the Examiner. Moreover, it cannot be said that a suggestion or motivation in the art has been disclosed to support a combination of the cited references to perform the functionality of the Appellants' claims. Thus, all claims in Claim Group A are in condition for allowance.

B. CLAIM GROUP B WAS INCORRECTLY REJECTED BECAUSE THE FINAL OFFICE ACTION FAILS TO ESTABLISH A PRIMA FACIE CASE OF OBVIOUSNESS

In the Final Office Action, claims 21-24, 27-35, and 38-42 (Claim Group B) were rejected under 35 U.S.C. 103(a) as being unpatentable over (i) Yamamoto, (ii) Brazilai, (iii) Nguyen, and (iv) McGuire. Appellants respectfully submit that the claims of Claim Group B are not obvious because the cited references do not teach all of the claim limitations of Claim Group B. Omissions in the cited art that are discussed below include: (i) an analysis controller located at a second location remote from said local controller; (ii) a data acquisition device to sensing at least one operating characteristic; and (iii) transmitting acquired data from the acquisition device through space to said receiver. The existence of even one claim element that is not disclosed in the prior art precludes the Examiner's rejections of Appellants' claims.

1. Contrary to the assertions of the Examiner, neither Yamamoto nor Barzilai discloses an analysis controller located at a second location remote from said local controller that is responsive to said acquired data.

Neither Yamamoto nor Barzilai discloses an analysis controller located at a second location from the local controller. Contrary to the assertions of the Examiner, the input terminal (element 21 in Fig. 12 of Yamamoto) cannot constitute an "analysis controller" of the Appellants' claim 21. For Element 21 in Fig. 12 of Yamamoto to constitute an "analysis controller," the unmanned dump trucks at 10, 11, 12, and 13 of Fig. 12 would need to constitute "local controllers" because Appellants' Claim 21 provides that "an analysis controller . . . is responsive to said acquired data from a plurality of local controllers for generating an analysis of said acquired data from said plurality of said local controllers." The dump trucks at 10, 11 12, and 13 of Yamamoto Fig. 12 cannot constitute "local controllers" as claimed because, in claim 21, each "local controller" is associated with a "receiver" that receives "acquired data" sent by a "transmitter" after being captured by a "data acquisition device." For the Examiner's assertion to be correct, the unmanned dump trucks at 10, 11, 12, and 13 of Yamamoto Fig. 12 would need to include a data acquisition device, a transmitter for *intra*-truck communication, a receiver to receive an intra-truck communication, and a local controller located on the truck to forward the intra-truck communication to the analysis controller. Yamamoto fails to disclose that each truck contains a transmitter, a receiver, and a local controller for transmitting acquired data relating to a truck and a receiver on that same truck. Thus, the computer at 21 in Fig. 12 of Yamamoto cannot be an "analysis controller located at a second location remote from said local controller."

Yamamoto provides further evidence that it does not disclose an analysis controller as claimed by the Appellants. There is absolutely no mention in Yamamoto of an analysis done in a remote fashion that is any different than the analysis done locally with respect to the need to replace a particular component. The Yamamoto disclosure does not disclose any ability to perform an aggregate analysis involving more than one machine. Therefore, claims 21, 31, and their dependent claims are in condition for allowance.

2. Contrary to the assertions of the Examiner, neither Yamamoto nor Barzilai discloses both a "data acquisition device for sensing at least one operating characteristic" and a "local controller."

The Examiner's interpretations of "data acquisition device" and "local controller" are inconsistent, indicating that the cited references to not disclose the "data acquisition device" and the "local controller" as claimed by the Appellants. Various sensors such as engine sensors are discussed in Column 4, Lines 20-50 of Yamamoto. However, the Final Office Action ignores the distinction between a data acquisition device and a local controller, and instead applies an extremely general view of such elements, as prohibited by *In re Thrift*. The Examiner improperly concluded that the sensors in Column 4, Lines 20-50 constitute both "data acquisition devices" and "local controllers." This interpretation ignores the distinctions in Claim Group B. By the very terms included in the claims, the "local controller" in the Appellants' claims receives data from a "receiver" receiving information sent through a "transmitter" (claim 21). Despite these limitations that distinguish a "local controller" from a "data acquisition device," the Examiner classifies Column 4, Lines 30-50 of Yamamoto as a "local controller" even though the sensor described is an engine RPM sensor, a device that would be located in the engine, and would not require the use of a receiver to receive input. In the terminology of the Appellants' claims, an RPM sensor would be a data acquisition device, not a local controller. This discrepancy indicates that the Examiner's reading of Yamamoto is flawed. In summary, the Examiner's assertion that Column 4, Lines 30-50 disclose a "local controller" is erroneous. If by some stretch of interpretation the assertion where correct, then the assertion that Column 4, Lines 20-29 discloses a "data acquisition device" would be in error. Therefore, claims 21, 31, 38 and their respective dependent claims are in condition for allowance.

3. No cited reference discloses "transmitting said acquired data from said data acquisition device through space to said receiver."

The word "space" and the functionality of transmitting data through space does not appear within the Final Office Action or the cited references. Moreover, the Final Office Action fails to acknowledge this argument as made by the Appellants in response to the Office Action dated May 21, 2002. Therefore, claim 22 and its dependent claims are in condition for allowance.

4. No cited reference discloses "an administrative controller separate from said analysis controller, wherein said analysis controller transmits said analysis of said data to said administrative controller."

The Final Office Action does not address the limitation of an administrative controller separate from an analysis controller. The Examiner cites Column 9, Lines 18-23 in Yamamoto to support the disclosure of both administrative controllers and analysis controllers. Thus, the cited references do not disclose administrative controllers separate from analysis controllers. Moreover, the Final Office Action fails to acknowledge this argument as made by the Appellants in response to the Office Action dated May 21, 2002. Therefore, claims 23, 35, and their respective dependent claims are in condition for allowance.

5. There is no suggestion or motivation in the art to combine the cited references as asserted by the Examiner.

Similar to the discussion in regards to Claim Group A, Yamamoto teaches away from Barzilai, Nguyen, and McGuire. Yamamoto ignores all non-technical information. There is no awareness of warranties, invoices, contracts, business-based utilization data, contracting entities, manufacturers, etc. Moreover, Yamamoto does not attempt in any way to aggregate data to generate an analysis. Rather, Yamamoto is focused solely on the benefit of keeping machines running on an individualized basis. Yamamoto may permit "world-wide" processing as asserted by the Examiner, but that simply means that Yamamoto may perform processing on an individual machine by individual machine basis, on machines located anywhere in the world. Thus, in contrast to Examiner's assertions, Yamamoto does not teach a "global management system." No matter the geographic scope of machines "managed" by a Yamamoto system, such a system is not equipped for any analysis reaching outside of the scope of a single individual machine. Moreover, Yamamoto is totally unconcerned with the relationships between various entities, and the contracts that may define such relationships. Yamamoto can only answer the question of when the next maintenance work for a particular machine is to take place. In contrast, Barzilai focuses solely on facilitating auction-based sales and does not teach any post-sale activities.

Barzilai also teaches away from the Appellants' claims and the other cited references. Barzilai has no post-sale awareness to support the processing as claimed by the Appellants, or as disclosed by Yamamoto. Barzilai treats each asset as a black box, in contrast to both the

Appellants' invention and Yamamoto. Because Barzilai's teachings relate only to activities leading up to a sale, the data used by Barzilai is totally different than the type of data used by Yamamoto, Nguyen, and McGuire. Barzilai is an auction system, and the auctioneer and the system are no longer concerned with an item after the auction is over. In summary, there is no suggestion or motivation in the art to combine the references as suggested by the Examiner.

The claims in Claim Group B are allowable for the reasons discussed above regarding Claim Group B. Claim 42 depends on claim 16, and thus the discussion relating to claim 16 and Claim Group A also applies to claim 42.

C. CLAIM GROUP C WAS INCORRECTLY REJECTED BECAUSE THE FINAL OFFICE ACTION FAILS TO ESTABLISH A PRIMA FACIE CASE OF OBVIOUSNESS

In the Final Office Action, claims 25-26 and 36-37 (Claim Group C) were rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto, Brazilai, Nguyen, and McGuire. Appellants respectfully submit that the claims of Claim Group C are not obvious because the cited references do not teach all of the claim limitations of Claim Group C. Thus, the Examiner has failed to establish a *prima facie* case of obviousness against Claim Group C.

Some of the claims in Claim Group C (claims 25-26) are dependent from some of the claims in Claim Group B, and thus claims 25-26 of Claim Group C are in condition for allowance for the same reasons that the claims in Claim Group B are in condition for allowance. Similarly, some of the claims in Claim Group C (claims 36-37) are dependent from some of the claims in Claim Group A, and thus claims 36-37 of Claim Group C are in condition for allowance for the same reasons that the claims in Claim Group A are in condition for allowance.

There are also claim elements unique to Claim Group C that provide additional distinctions with respect to the prior art cited by the Examiner. The absence of those elements within the cited disclosures precludes the Examiner's rejections of Appellants' claims.

1. The cited references do not disclose "management reports relating to the procurement and utilization of the asset"

The Final Office Action does not provide any citation in the cited references that discloses the ability to create "procurement" or "utilization" management reports because the cited references do not disclose these claim elements. Neither Nguyen's warranty report nor

McGuire's recap and diagnostic reports teaches the functionality analyzing and/or aggregating data to generate procurement and utilization reports as claimed. The decision in *In re Thrift* prohibits such an over-generalized approach. Thus, the claims in Claim Group C are in condition for allowance.

2. There is no suggestion or motivation in the art to combine the cited references as asserted by the Examiner.

For the same reasons discussed above in relation to Claim Group B, it would not have obvious to one of ordinary skill in the art to combine the cited references at the time of invention. Therefore, Claim Group C is in condition for allowance.

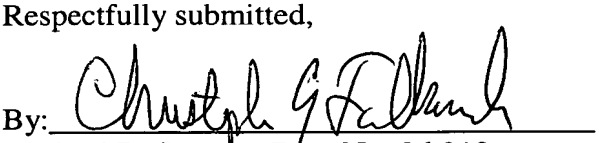
IX. CONCLUSION

Appellants respectfully submit that all of the appealed claims in this application are patentable for at least the reasons stated above and request that the Board of Patent Appeals and Interferences overrule the Examiner and direct allowance of the rejected claims.

Although the Examiner cited numerous references against the Applicants' claims, those references fail to disclose several material elements of the Appellants' claims. Only one novel and non-obvious element is required for patentability. Numerous patentable elements are discussed herein. Moreover, the various claim elements need to be interpreted as a whole, in the context of the functionality of the Appellants' claims, not in a piecemeal fashion utilizing as many as five distinct references. There is no suggestion or motivation in the art to combine the numerous cited references to perform the functionality of Applicants' claims. In summary, the rejection of Appellants' claims was not proper because the Examiner failed to: (i) disclose all of the claim elements in prior art; and (ii) provide evidence supporting the assertion that a suggestion or motivation existed in the art to combine the references as asserted by the Examiner.

This brief is submitted in triplicate. It is believed that any fees due with respect to this paper have been identified in any transmittal accompanying this paper. However, if any additional fees are required in connection with the filing of this paper that are not identified in any accompanying transmittal, permission is given to charge account number 18-0013 in the name of Rader, Fishman and Grauer PLLC.

Respectfully submitted,

By: 

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APPENDIX OF CLAIMS ON APPEAL – CLAIMS 16 AND 21-48

16. A method for automatically gathering and analyzing data without human intervention relating to an asset comprising the steps of:

(a) generating a maintenance invoice from an analysis controller when service is performed on the asset, wherein the maintenance invoice includes an indication of the amount of usage of the asset, wherein said indication of the amount of usage is captured by a data acquisition device, and wherein a receiver receives the indication of the amount of usage from the data acquisition device through a transmitter;

(g) transmitting the maintenance invoice on a communications network from the analysis controller to an administrative controller;

(h) comparing on the analysis controller, the indication of the amount of usage of the asset with a predetermined standard that is representative of the warranty period; and

(i) generating a warranty report from said administrative controller without said human intervention if the amount of usage is less than the predetermined standard.

21. A system for gathering and analyzing data relative to an asset comprising:

a data acquisition device for sensing at least one operating characteristic of the asset and for generating acquired data that is representative thereof;

a transmitter attached to the asset for transmitting said acquired data from said data acquisition device;

a receiver for receiving said acquired data transmitted from said transmitter;

a local controller associated with said receiver that is in at least periodic communication with said transmitter;

an analysis controller located at a second location remote from said local controller that is responsive to said acquired data from a plurality of local controllers for generating an analysis of said acquired data from said plurality of said local controllers, said analysis controller being configured for automatically determining without human intervention whether maintenance of the asset has been provided; and

an electronic communications network connected between each of said local controllers

and said analysis controller and permitting transmission of said acquired data from said local controller to said analysis controller.

22. The system defined in claim 21, wherein said transmitter includes a wireless communications system for transmitting said acquired data from said data acquisition device through space to said receiver.

23. The system defined in claim 21, further including an administrative controller separate from said analysis controller, wherein said analysis controller transmits said analysis of said data to said administrative controller.

24. The system defined in claim 23, wherein there are a plurality of administrative controllers.

25. The system defined in claim 23, wherein said analysis controller is configured to generate management reports relating to the procurement and utilization of the asset.

26. The system defined in claim 25, wherein said analysis controller is configured to post said reports to a website maintained on the internet.

27. The system defined in claim 21, wherein there is a warranty associated with the asset and there are a plurality of responsible parties associated with said system, said analysis controller configured to use at least a portion of said acquired data in automatically determining which of said responsible parties has responsibility in whole or in part for maintenance performed on the asset based on said warranty.

28. The system defined in claim 27, wherein a first responsible party comprises at least one of a manufacturer and a supplier of the asset and a second responsible party comprises at least one of an owner or user of the asset.

29. The system defined in claim 27, wherein said analysis controller includes a record of the asset, said record including said responsible parties and the nature of said responsibility, the nature of said responsibility including a factor based on said at least one operating characteristic of the asset

30. The system defined in claim 29, wherein said factor comprises at least one of an amount of asset usage and date of service.

31. A system for gathering and analyzing data relative to an asset comprising:

a data acquisition device for sensing at least one operating characteristic of the asset and for generating acquired data that is representative thereof;

a transmitter attached to the asset for transmitting said acquired data from said data acquisition device;

a receiver for receiving said acquired data transmitted from said transmitter;

a local controller associated with said receiver that is in at least periodic communication with said transmitter;

an analysis controller located at a second location remote from said local controller that is responsive to said acquired data from a plurality of local controllers for generating an analysis of said acquired data from said plurality of said local controllers, said analysis controller being configured for automatically determining without human intervention whether maintenance of the asset has been provided;

an electronic communications network connected between each of said local controllers and said analysis controller and permitting transmission of said acquired data from said local controller to said analysis controller;

wherein there are a plurality of responsible parties associated with said system, a first responsible party comprising at least one of a manufacturer and a supplier of the asset and a second responsible party comprising at least one of an owner or user of the asset, said analysis

controller configured to use at least a portion of said acquired data in automatically determining which of said responsible parties has responsibility in whole or in part for maintenance performed on the asset;

said analysis controller including a record of the asset, said record including said responsible parties and the nature of said responsibility, the nature of said responsibility including a factor based on said at least one operating characteristic of the asset.

32. The system defined in claim 31, wherein there is a warranty associated with the asset, and the nature of said responsibility is based on said warranty.

33. The system defined in claim 31, wherein said at least one operating characteristic of the asset comprises an amount of asset usage, said amount of asset usage being used to automatically determine which of said responsible parties has said responsibility.

34. The system defined in claim 31, wherein said at least one operating characteristic of the asset comprises a date of service, said date of service being used to automatically determine which of said responsible parties has said responsibility.

35. The system defined in claim 31, further including an administrative controller separate from said analysis controller, wherein said analysis controller transmits said analysis of said data to said administrative controller.

36. The system defined in claim 35, wherein there are a plurality of administrative controllers, said analysis controller configured to generate management reports relating to the procurement and utilization of the asset.

37. The system defined in claim 36, wherein said analysis controller is configured to post said reports to a website maintained on the internet.

38. A system for gathering and analyzing data relating to an asset comprising:

a local controller located at a first location for acquiring data that is representative of at least one operating characteristic of the asset;

an analysis controller that is responsive to said acquired data from a plurality of local controllers for generating an analysis of said acquired data, said analysis controller being configured to determine whether maintenance of the asset has been provided;

an electronic communications network connected between said local controller and said analysis controller and permitting transmission of said acquired data from said local controller to said analysis controller;

wherein there are a plurality of responsible parties associated with said system, said analysis controller configured to use at least a portion of said acquired data in automatically determining which of said responsible parties has responsibility in whole or in part for maintenance performed on the asset; and

said analysis controller including a record of the asset, said record including said responsible parties and the nature of said responsibility, the nature of said responsibility including a factor based on said at least one operating characteristic of the asset.

39. The system defined in claim 38, wherein there is a warranty associated with the asset, and the nature of said responsibility is based on said warranty.

40. The system defined in claim 39, wherein said at least one operating characteristic of the asset comprises at least one of an amount of asset usage and a date of service.

41. The system as defined in claim 40, said record including past acquired data, said current acquired data automatically compared with said past acquired data without human intervention using predetermined criteria to determine whether maintenance of the asset is required.

42. The system as defined in claim 41, wherein said predetermined criteria includes at least one of a period of time or asset usage.

43. The method defined in claim 16, wherein the entity performing service on the asset is not the owner.

44. The method defined in claim 16, wherein the entity performing service on the asset is not the operator of the asset.

45. The method as defined in claim 16, wherein the maintenance invoice is generated for a second entity on behalf of a first entity.

46. The method defined in claim 16, wherein the warranty report is generated for a second entity on behalf of a first entity.

47. The method defined in claim 16, further comprising the step of determining when service should be performed on the asset based on the amount of usage of the asset.

48. The method defined in claim 16, wherein service must be performed on an asset before the amount of usage of the asset is compared to the predetermined standard.